

### ABSTRACT

The invention relates to long-acting nitrous acid compositions that disinfect inanimate surfaces and animal tissues, and that can be used to treat diseases and wounds. Compositions of the invention are single-phase, metastable nitrous acid solutions that exhibit enhanced germicidal efficacy and can have an effective lifetime exceeding several years. Compositions of the invention have a wide variety of applications that include, but are not limited to, teat dips, oral rinses, instrument sterilization, and disinfection of food.